Fact Sheet: Pollution Prevention For Automotive Maintenance Repair Shops

Pollution Prevention is good business

Pollution prevention or P2 is about generating less waste and pollutants and increasing efficiency. P2 cost-effectively solves many problems associated with waste generation, discharges, and emissions. Every automotive maintenance and repair shop employs some of the techniques discussed in this brochure. Many of these are simply "good business practices" or "standard operating procedures." The purpose of this brochure is to provide a brief checklist to help operators identify additional opportunities for improvement.

What is Pollution Prevention?

P2 is the use of materials, processes, or practices that reduce or eliminate the generation of pollutants or wastes at the source. This includes reducing the use of materials, energy and water, and by improving efficiency, indirectly protect natural resources.

Six reasons why you should be interested in P2

1. Reduce materials use and costs.
2. Cut waste disposal costs.
3. Improve operations and efficiency.
4. Help comply with environmental regulations.
5. Minimize wastewater discharges and air emissions.
6. Reduce liability and associated costs.

Pollution prevention in automotive maintenance and repair shops

Pollution prevention techniques apply to your facility's general operations, like shop clean up, and services, including fluid and parts replacement, and parts and collision repair. P2 techniques involve using fewer toxic materials, installing equipment that increases efficiency by reducing raw materials use and waste, and by reuse and recycling practices.

Making changes in your facility requires the understanding and commitment of managers and employees. Therefore, the techniques described in this brochure should be implemented with a program to inform, train, and involve all your employees.

Also, tell your customers about the environmentally friendly materials that you have available. For example, inform customers about the availability of bayonet style quick drain connectors which help reduce spills during oil changes. The number of customers interested in these "green products" will surprise you.

Facility Operations

• Segregate wastes to increase recyclability.

• Keep careful records of inventory.

• Implement a "first-in, first-out" policy of chemical products use. Do not order more than can be used within the shelf life of the product. Labels and expiration dates should be legible.

• Designate one person to manage raw materials for proper inventory control and to ensure that hazardous substances are properly contained and labeled and that a Material Safety Data Sheet (MSDS) is on file for each.

• Minimize spills and use dry methods for cleanup when possible. If an oil spill occurs, use a polyethylene mop followed by a shop rag. Avoid using dry sweep or "kitty litter" because these materials may require disposal as hazardous material after use.

• Minimize using water to clean floors. A damp mop and/or wet vac can be used for routine cleaning of floors.

• Close the loop and become a **ZERO** discharger. If dry clean up methods are successful, seal your floor drains.

• When cleaning floors, avoid using alkaline detergents which emulsify oil and separators. Alternatives are available. Ask your supplier.

• To prevent storm water discharges, avoid working in outdoor areas. If this isn't possible, grade, pave, and berm outdoor areas to collect discharges in a single drain connected to the sanitary sewer. Cover materials stored outdoors.

• Purchase material in bulk refillable returnable containers (55 gallon drums) instead of small containers (5-10 gallon containers) to reduce material cost and packaging.

• Recycle cardboard, paper, plastic, and metals.

• Conserve energy by using energy-efficient lights and equipment and turn them off when not in use.

• Conserve water and reduce waste by installing water-saving devices, reusing water and using only what you need.

• Contract with an industrial laundry service to launder shop towels. Note that these services may not accept heavily contaminated towels.

Fluid Replacement

• Replace oil drain plugs with bayonet style quick drain connectors. Using these connectors makes it possible to pump out oil during change-outs, reducing spills.

• Use large drip pans under vehicles to minimize the need to clean the shop floor.

• Combine transmission and brake fluids. It is not cost effective to recycle these waste separately.

• Drain oil filters to recover oil. Crushing recovers additional oil. Send filters to a scrap metal recycler.

• Recover CFC and HCF from air conditioners. The value of the recovered material will increase steadily as virgin CFCs are phased out.

• Use propylene glycol instead of ethylene glycol antifreeze.

• Recycle oil and antifreeze. Contract with a licensed recycler.

Parts Replacement

• Investigate oil filters that extend engine oil life.

• Recycle used batteries.

• Recondition water pumps, carburetors, and alternators.

• Reuse and recycle tires.

C Parts Repair and Cleaning

• Eliminate chlorinated solvents, which are highly toxic and hard to dispose of.

• Use detergents or water-based parts cleaners. Alkaline cleaners have been proven to be effective substitutes.

• Install an aqueous-based parts washing system instead of a solvent sink. The units are effective, reduce labor costs associated with cleaning, and cut employee exposure to toxics.

• Implement two-stage part cleaning-- use dirty solvent first then virgin solvent for final cleaning to reduce solvent purchases.

• Cover solvent sinks and parts washers when not in use to reduce air emissions.

Collision Repair

• Use high volume, low pressure spray paint equipment to achieve a high transfer efficiency.

• Experiment with alternative paints including water-based spray paints and high-solid paints.

• Purchase aerosol paints that do not contain CFCs. Use mechanical stripping methods instead of paint removers.

• Give left over paint to customer or donate to trade schools or community organizations.

•Send parts to an auto dismantler who can reuse or recycle them.

Trade Associations

Trade associations like the National Automotive Service Association, Arizona Automobile Recycler's Association are often sources of information on new procedures, equipment and products, environmental permitting and pollution prevention.

For more information:

Arizona Department of Environmental Quality

Pollution Prevention Unit

(602) 207-4235

FAX (602) 207-4236

Pollution Prevention Library

(602) 207-2217

Chemical Information

Chemtrec Center (800) 262-8200

Recycling Hotline

(602) 253-2687

Small Business Assistance Center

Maricopa County (602) 506-5150

http://www.maricopa.gov/envsv/sbeap.htm

Pima County (520) 740-3342

http://www.deq.pima.gov/business_assistance.html

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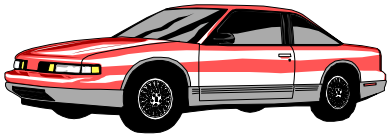
POLLUTION PREVENTION

FOR

AUTOMOTIVE MAINTENANCE

AND

REPAIR SHOPS



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